AD-A070 562 ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
19702A GSRS, MISSILE NUMBER 339, ROUND NUMBER B-8.(U)
APR 79

UNCLASSIFIED ECOM-DR-998 NL

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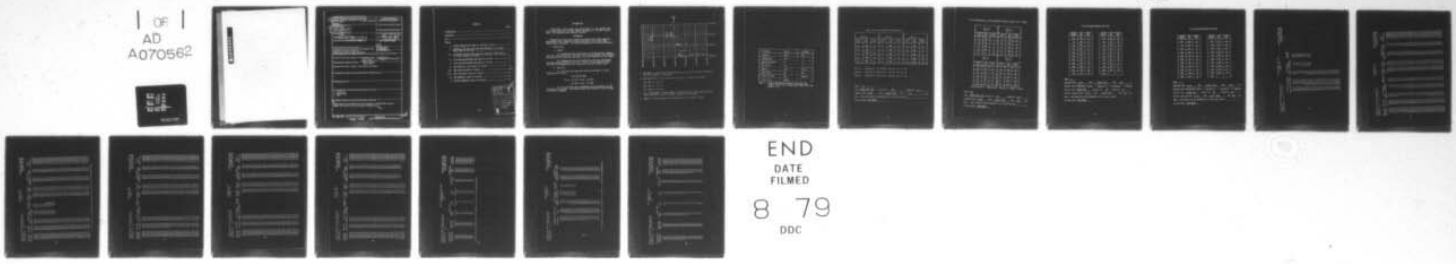

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METEOROLOGICAL DATA REPORT

[illegible]
Missile No. [illegible]
Round No. [illegible]

by

WSMR Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

(14) ECOM- **REPORT DOCUMENTATION PAGE**

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: DR-998
2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle): (6) 19702A GSRS, Missile Number 339, Round Number B-8.
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18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

1. Ballistics
2. Meteorology
3. Wind

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of 19702A GSRS, Missile Number 339, Round B-8, are presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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CONTENTS

INTRODUCTION

19702A GSRS, Missile Number 339, Round Number B-8, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1127 MST, 5 April 1979. The scheduled launch time was 1125 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

   a. Surface

   (1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction, wind velocity and cloud cover were made at the LC-33 Met Site at T-0 minutes.

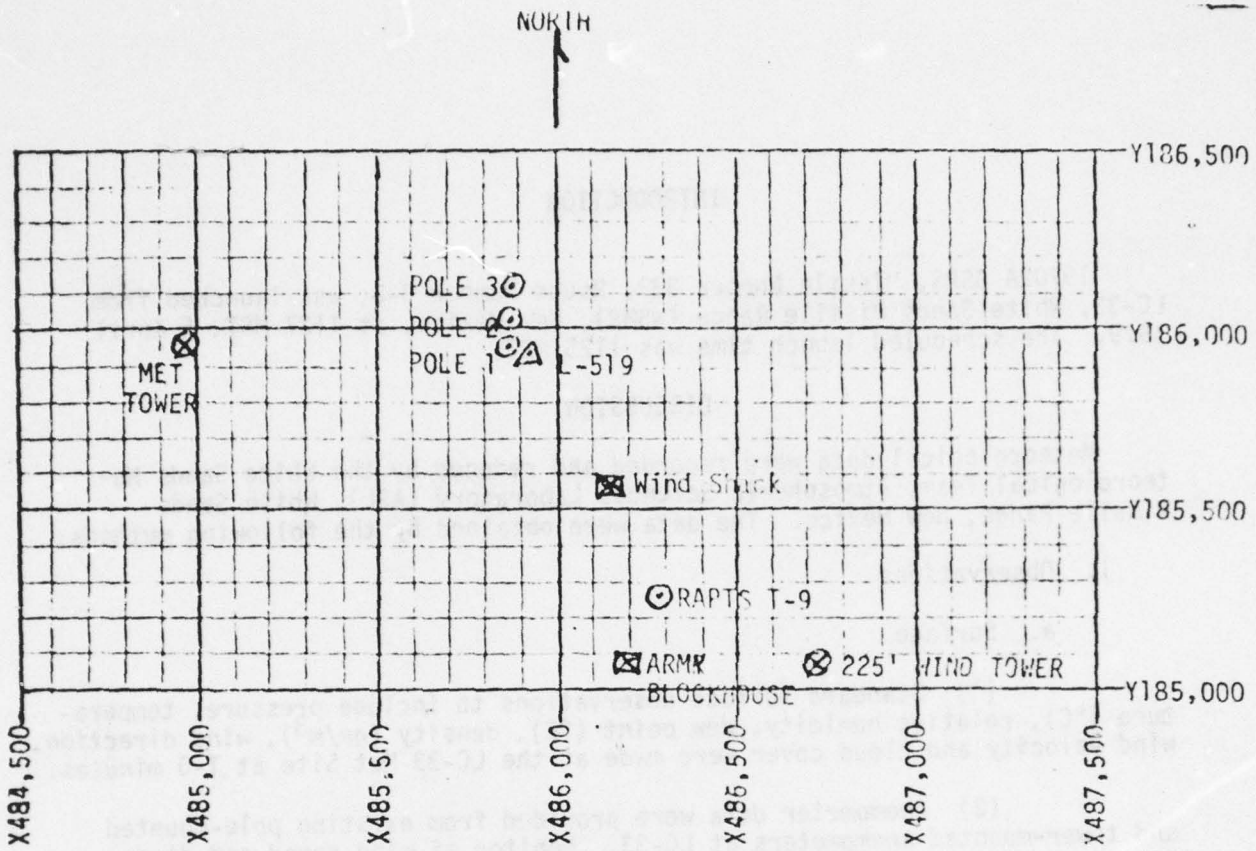
   (2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

   b. Upper Air

   (1) Low level wind data were obtained from RAPTS T-9 pibal observation as follows:

SITE AND ALTITUDE		
LC-33	1 km (50 m incs)	1115 MST
	1 km (50 m incs)	1127 MST

   (2) Air structure data (rawinsonde) were collected at the SMR Met Site at T-0 minutes. Data were collected from surface to 125% of apogee in 500-feet increments.



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders in Wind Shack.

2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders in Wind Shack

   (a) Pole #1 - 38.7 ft

   (b) Pole #2 - 53.0 ft

   (c) Pole #3 - 83.6 ft

3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 83 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.

4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

ELEVATION	3977.3	FEET/MSL
PRESSURE	883.1	MBS
TEMPERATURE	18.0	°C
RELATIVE HUMIDITY	31	%
DEW POINT	0.6	°C
DENSITY	1052	GM/M^3
WIND SPEED	04	MPH
WIND DIRECTION	040	DEGREES
CLOUD COVER	CLEAR	

TABLE I. SURFACE OBSERVATIONS TAKEN AT 1130 LOCAL TIME, 5 APRIL 1979 AT LC-33, 19702A GSRS, MISSILE NO. 339, ROUND NO. B-8.

LC33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	036	10	-30	058	00	-30	062	15
-20	049	11	-20	060	00	-20	050	13
-10	038	09	-10	062	00	-10	053	15
0.0	055	09	0.0	062	00	0.0	056	20
+10	047	13	+10	056	03	+10	048	16

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

TABLE II

TYPE 19702A GSRS (FD) MISSILE NO. 339 ROUND NO. B-8

LAUNCHED FROM LC-33 DATE 5 April 1979 TIME 1127 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 ft			LEVEL #2 62 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	070	8	-30	032	10
-20	035	10	-20	026	12
-10	020	11	-10	003	12
0.0	007	10	0.0	360	12
+10	018	10	+10	360	12
LEVEL #3 102 ft			LEVEL #4 202 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	037	20	-30	010	40
-20	028	20	-20	010	38
-10	018	19	-10	010	36
0.0	015	19	0.0	010	36
+10	012	19	+10	010	39

WTSM COORDINATES: X484,982.64 Y185,957.73 H3983.00 (base)

TABLE III

TYPE 19702A GSRS (FD) MISSILE NO. 339 ROUND NO. B-8

LAUNCHED FROM LC-33 DATE 5 April 1979 TIME 1127 MST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH TRUE NORTH .

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIR DEG	SPEED MPH
SUR	040	04
50	033	02
100	027	01
150	007	07
200	025	10
250	030	11
300	036	11
350	060	09
400	040	09
450	040	06
500	041	08

HEIGHT METERS	DIR DEG	SPEED MPH
550	035	09
600	359	06
650	343	04
700	076	04
750	077	07
800	041	06
850	305	04
900	343	02
950	358	07
1000	003	06
1050		

TABLE IV

RELEASED FROM LC-33 DATE 5 April 1979 TIME 1115 LST

RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 182,350.16 H = 3977.30

MISSILE TYPE 19702A GSRS MISSILE NO. 339 ROUND NO. B-8

MISSILE LAUNCHED FROM LC-33 DATE 5 April 1979 TIME 1127 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH.

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIR DEG	SPEED MPH
SUR	060	05
50	045	07
100	031	09
150	044	11
200	010	10
250	347	09
300	355	08
350	349	07
400	037	10
450	036	10
500	009	04

HEIGHT METERS	DIR DEG	SPEED MPH
550	015	04
600	042	06
650	357	09
700	002	10
750	018	08
800	027	05
850	354	01
900	279	03
950	279	01
1000	223	04
1050		

TABLE V

RELEASED FROM LC-33 DATE 5 April 1979 TIME 1127 LST

RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 182,350.16 H = 3977.30

MISSILE TYPE 19702A GSRS MISSILE NO. 339 ROUND NO. B-8

MISSILE LAUNCHED FROM LC-33 DATE 5 April 1979 TIME 1127 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH.

SIGNIFICANT LEVEL DATA

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

09500-0058
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
682.2	3997.3	20.4	.3	26.0
674.0	4259.8	16.5	-4.7	23.0
650.0	5053.7	14.0	-5.2	26.0
642.6	5275.4	13.5	-5.6	26.0
791.8	6979.4	8.9	-7.7	30.0
771.8	7672.1	6.8	-8.7	32.0
752.0	8372.4	6.1	-9.3	32.0
713.6	9763.6	6.5	-16.1	18.0
700.0	10301.4	5.9	-16.6	18.0
569.6	15721.8	-6.3	-26.1	19.0
500.0	19021.5	-14.4	-31.8	21.0
435.6	22400.3	-23.3	-39.4	21.0
400.0	24454.0	-28.0	-43.5	21.0
346.6	27769.8	-35.3	-49.7	21.0
300.0	31052.4	-42.3		
250.0	35019.0	-50.6		
200.0	39769.6	-60.0		
193.2	40418.2	-61.8		
150.0	45575.1	-62.4		
125.0	49274.8	-63.7		
102.6	53255.8	-67.4		
100.0	53747.3	-66.5		
77.4	58914.4	-62.5		
70.0	60952.7	-64.3		
66.6	61904.9	-61.6		
58.6	64594.7	-59.8		
51.0	67460.9	-60.0		
50.0	67871.2	-58.1		
30.0	78501.5	-54.3		
27.4	80564.4	-45.0		
25.8	81893.1	-45.5		
22.6	84854.6	-39.3		
20.0	87602.2	-43.2		
10.4	102463.3	-34.0		

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
09500 U58
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3997.3	862.2	20.4	.3	26.0	1044.1	660.4	340.0	8.0	1.000260
4000.0	862.1	20.4	.2	26.0	1044.2	660.3	340.1	7.9	1.000260
4500.0	806.5	15.7	-4.8	23.9	1043.0	662.6	12.0	4.0	1.000252
5000.0	851.0	14.1	-5.1	25.9	1030.2	660.9	84.8	4.4	1.000249
5500.0	835.7	12.9	-5.9	26.5	1016.0	659.5	82.2	3.3	1.000245
6000.0	820.6	11.5	-6.5	27.7	1002.4	657.9	69.0	2.1	1.000241
6500.0	805.8	10.2	-7.1	28.9	989.0	656.3	10.5	1.3	1.000237
7000.0	791.2	8.8	-7.7	30.1	975.8	654.7	303.5	2.4	1.000234
7500.0	776.7	7.3	-8.5	31.5	963.2	653.0	285.1	4.8	1.000230
8000.0	762.5	6.5	-9.0	32.0	948.5	651.9	280.8	8.4	1.000226
8500.0	748.4	6.1	-9.8	30.7	932.2	651.5	279.4	12.3	1.000222
9000.0	734.7	6.3	-11.9	25.8	914.5	651.8	269.8	13.6	1.000216
9500.0	721.2	6.4	-14.4	20.8	897.7	651.7	260.7	15.0	1.000210
10000.0	707.9	6.2	-16.3	18.0	881.3	651.5	251.2	15.6	1.000205
10500.0	694.7	5.5	-16.9	18.0	867.9	650.5	252.2	16.1	1.000201
11000.0	681.6	4.3	-17.8	18.1	855.1	649.2	255.8	16.7	1.000198
11500.0	668.8	3.2	-18.6	18.2	842.4	647.9	260.4	17.3	1.000195
12000.0	656.2	2.1	-19.5	18.3	830.0	646.5	263.5	17.9	1.000191
12500.0	643.8	1.0	-20.4	18.4	817.7	645.2	263.7	18.1	1.000188
13000.0	631.7	-.2	-21.3	18.5	805.7	643.9	263.3	18.1	1.000185
13500.0	619.8	-1.3	-22.1	18.6	793.8	642.5	261.0	16.9	1.000182
14000.0	608.1	-2.4	-23.0	18.7	782.1	641.2	259.8	16.0	1.000179
14500.0	596.7	-3.6	-23.9	18.8	770.6	639.8	259.1	15.6	1.000176
15000.0	585.5	-4.7	-24.8	18.9	759.3	638.5	245.9	14.9	1.000173
15500.0	574.4	-5.8	-25.7	19.0	748.1	637.1	243.1	14.0	1.000171
16000.0	563.4	-7.0	-26.5	19.2	737.0	635.7	243.6	12.3	1.000168
16500.0	552.4	-8.2	-27.4	19.5	726.0	634.3	248.2	10.7	1.000165
17000.0	541.6	-9.4	-28.3	19.8	715.1	632.8	251.2	11.0	1.000163
17500.0	531.0	-10.7	-29.1	20.1	704.4	631.3	254.4	11.4	1.000160
18000.0	520.6	-11.9	-30.0	20.4	693.9	629.8	257.9	12.0	1.000157
18500.0	510.4	-13.1	-30.9	20.7	683.6	628.3	261.6	12.5	1.000155
19000.0	500.4	-14.3	-31.8	21.0	673.4	626.8	263.4	12.8	1.000152
19500.0	490.3	-15.7	-32.9	21.0	663.2	625.2	267.8	13.1	1.000150
20000.0	480.4	-17.0	-34.0	21.0	653.2	623.6	272.5	13.3	1.000147
20500.0	470.7	-18.3	-35.2	21.0	643.3	622.0	275.3	13.6	1.000145
21000.0	461.2	-19.6	-36.3	21.0	633.6	620.4	277.2	13.7	1.000143
21500.0	451.9	-20.9	-37.4	21.0	624.0	618.8	271.2	14.2	1.000140
22000.0	442.8	-22.2	-38.5	21.0	614.7	617.1	268.7	14.9	1.000138
22500.0	433.8	-23.5	-39.6	21.0	605.5	615.6	268.7	15.5	1.000136
23000.0	424.8	-24.7	-40.6	21.0	595.5	614.1	268.2	16.2	1.000134

UPPER AIR DATA
095006 058
S M R

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	416.0	-25.8	-41.6	21.0	585.9	612.7	249.4	15.2	1.000131
24000.0	407.3	-27.0	-42.6	21.0	576.4	611.3	248.8	14.2	1.000129
24500.0	398.9	-28.1	-43.6	21.0	567.1	609.8	252.0	14.4	1.000127
25000.0	390.4	-29.2	-44.5	21.0	557.5	608.5	255.0	14.9	1.000125
25500.0	382.1	-30.3	-45.5	21.0	548.1	607.1	257.1	17.8	1.000123
26000.0	374.0	-31.4	-46.4	21.0	538.9	605.7	258.8	20.7	1.000121
26500.0	366.0	-32.5	-47.3	21.0	529.9	604.3	261.2	23.4	1.000119
27000.0	358.3	-33.6	-48.3	21.0	521.0	603.0	263.1	26.2	1.000117
27500.0	350.6	-34.7	-49.2	21.0	512.3	601.6	265.4	29.3	1.000115
28000.0	343.1	-35.8	-50.8	19.5**	503.5	600.2	267.2	32.5	1.000113
28500.0	335.6	-36.9	-53.2	16.5**	494.7	598.9	269.3	35.4	1.000110
29000.0	328.2	-37.9	-55.9	13.1**	486.1	597.5	271.1	38.1	1.000108
29500.0	321.1	-39.0	-58.0	9.9**	477.7	596.1	272.3	39.1	1.000107
30000.0	314.0	-40.1	-62.8	6.6**	469.4	594.8	272.8	40.6	1.000105
30500.0	307.2	-41.2	-68.4	3.4**	461.2	593.4	269.9	43.8	1.000103
31000.0	300.4	-42.2	-66.5	.2**	453.2	592.0	267.6	44.0	1.000101
31500.0	293.7	-43.3			445.0	590.7	265.6	41.4	1.000099
32000.0	287.0	-44.3			436.9	589.3	264.4	39.7	1.000097
32500.0	280.5	-45.4			429.0	588.0	263.3	38.7	1.000096
33000.0	274.2	-46.4			421.2	586.6	261.4	41.4	1.000094
33500.0	268.0	-47.4			413.5	585.3	260.0	44.0	1.000092
34000.0	261.9	-48.5			406.1	583.9	259.8	46.0	1.000090
34500.0	256.0	-49.5			398.8	582.6	259.8	48.0	1.000089
35000.0	250.2	-50.6			391.6	581.2	260.5	50.2	1.000087
35500.0	244.3	-51.6			384.1	579.9	261.0	52.5	1.000086
36000.0	238.6	-52.6			376.8	578.6	260.9	54.9	1.000084
36500.0	233.0	-53.6			369.6	577.3	260.8	56.8	1.000082
37000.0	227.5	-54.6			362.6	576.0	260.7	58.0	1.000081
37500.0	222.2	-55.6			355.7	574.6	260.7	58.5	1.000079
38000.0	216.9	-56.6			349.0	573.3	260.9	57.1	1.000078
38500.0	211.8	-57.6			342.3	572.0	261.2	55.8	1.000076
39000.0	206.9	-58.6			335.9	570.7	261.5	55.8	1.000075
39500.0	202.0	-59.6			329.5	569.3	261.8	55.8	1.000073
40000.0	197.2	-60.7			323.4	567.8	262.0	55.4	1.000072
40500.0	192.4	-61.8			317.2	566.4	262.2	55.0	1.000071
41000.0	187.8	-61.9			309.6	566.3	262.7	54.9	1.000069
41500.0	183.2	-61.9			302.2	566.2	263.2	54.8	1.000067
42000.0	178.8	-62.0			294.9	566.1	263.8	55.1	1.000066
42500.0	174.4	-62.0			287.8	566.0	264.6	55.5	1.000064
43000.0	170.2	-62.1			280.9	566.0	253.8	57.2	1.000063

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
095006U56
S M R

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	106.1	-62.2			274.2	565.9	255.9	60.0	1.000061
44000.0	102.1	-62.2			267.6	565.8	253.6	63.1	1.000060
44500.0	158.1	-62.3			261.2	565.7	252.9	66.3	1.000058
45000.0	154.3	-62.3			255.0	565.7	253.1	69.0	1.000057
45500.0	150.6	-62.4			248.9	565.6	255.6	70.5	1.000055
46000.0	146.9	-62.5			243.0	565.4	258.0	72.2	1.000054
46500.0	143.3	-62.7			237.3	565.1	258.3	74.4	1.000053
47000.0	139.8	-62.9			231.7	564.9	258.5	76.6	1.000052
47500.0	136.4	-63.1			226.2	564.7	258.2	76.9	1.000050
48000.0	133.1	-63.3			220.9	564.4	257.8	76.9	1.000049
48500.0	129.9	-63.4			215.7	564.2	256.0	75.3	1.000048
49000.0	126.7	-63.6			210.6	563.9	253.5	72.8	1.000047
49500.0	123.6	-63.9			205.6	563.5	252.1	71.5	1.000046
50000.0	120.6	-64.4			201.2	562.9	252.8	71.6	1.000045
50500.0	117.6	-64.8			196.7	562.3	253.6	72.0	1.000044
51000.0	114.7	-65.3			192.2	561.6	254.2	74.6	1.000043
51500.0	111.9	-65.8			187.9	561.0	254.8	77.2	1.000042
52000.0	109.1	-66.2			183.7	560.4	255.3	78.1	1.000041
52500.0	106.4	-66.7			179.6	559.7	255.8	78.2	1.000040
53000.0	103.8	-67.2			175.6	559.1	256.9	77.2	1.000039
53500.0	101.2	-66.9			171.0	559.4	256.5	74.2	1.000038
54000.0	98.8	-66.3			166.3	560.3	256.3	71.1	1.000037
54500.0	96.3	-65.9			161.9	560.8	255.0	66.1	1.000036
55000.0	94.0	-65.5			157.7	561.3	254.0	61.1	1.000035
55500.0	91.7	-65.1			153.5	561.9	254.6	57.7	1.000034
56000.0	89.4	-64.6			149.3	562.4	255.3	54.5	1.000033
56500.0	87.2	-64.4			145.6	562.9	254.9	52.7	1.000032
57000.0	85.1	-64.0			141.7	563.4	255.5	52.1	1.000032
57500.0	83.0	-63.6			138.0	564.0	256.4	51.5	1.000031
58000.0	81.0	-63.2			134.4	564.5	256.1	51.0	1.000030
58500.0	79.0	-62.6			130.9	565.0	255.9	50.4	1.000029
59000.0	77.1	-62.0			127.5	565.5	255.9	49.5	1.000028
59500.0	75.2	-63.0			124.7	564.7	255.9	48.6	1.000028
60000.0	73.4	-63.5			121.9	564.1	255.9	47.8	1.000027
60500.0	71.6	-63.9			119.2	563.5	255.7	47.3	1.000027
61000.0	69.8	-64.2			116.4	563.2	255.7	46.9	1.000026
61500.0	68.1	-62.8			112.9	563.0	256.0	46.9	1.000025
62000.0	66.5	-61.6			109.3	563.7	256.2	46.8	1.000024
62500.0	64.9	-61.2			106.7	567.1	253.3	46.8	1.000024
63000.0	63.3	-60.9			103.9	567.6	254.5	46.7	1.000023

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
095006 058
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
03500.0	61.8	-60.5			101.3	568.0	265.8	46.5	1.000023
04000.0	60.3	-60.2			98.7	568.5	267.2	46.4	1.000022
04500.0	58.9	-59.9			96.2	569.0	268.4	46.1	1.000021
05000.0	57.5	-59.8			93.8	569.0	268.7	45.4	1.000021
05500.0	56.1	-59.9			91.6	569.0	269.0	44.7	1.000020
06000.0	54.7	-59.9			89.4	568.9	267.4	43.5	1.000020
06500.0	53.4	-59.9			87.3	568.9	265.1	42.2	1.000019
07000.0	52.2	-60.0			85.2	568.8	262.6	41.1	1.000019
07500.0	50.9	-59.8			83.1	569.0	259.9	40.4	1.000019
08000.0	49.7	-56.1			80.5	571.4	257.0	39.7	1.000018
08500.0	48.5	-57.9			78.5	571.0	256.1	39.2	1.000017
09000.0	47.4	-57.7			76.5	571.0	255.8	38.7	1.000017
09500.0	46.3	-57.5			74.8	572.1	255.6	38.3	1.000017
10000.0	45.2	-57.3			72.9	572.3	256.2	37.7	1.000016
10500.0	44.1	-57.2			71.2	572.5	256.8	37.2	1.000016
11000.0	43.1	-57.0			69.4	572.8	257.8	36.6	1.000015
11500.0	42.1	-56.8			67.7	573.0	259.3	35.9	1.000015
12000.0	41.1	-56.6			66.1	573.2	260.8	35.2	1.000015
12500.0	40.1	-56.5			64.5	573.5	263.2	34.3	1.000014
13000.0	39.2	-56.3			62.9	573.7	265.8	33.4	1.000014
13500.0	38.2	-56.1			61.4	573.9	268.2	32.6	1.000014
14000.0	37.3	-55.9			59.9	574.2	269.4	31.3	1.000013
14500.0	36.5	-55.5			58.4	574.4	270.6	30.0	1.000013
15000.0	35.6	-55.6			57.0	574.6	270.6	28.4	1.000013
15500.0	34.8	-55.4			55.6	574.9	269.2	26.3	1.000012
16000.0	34.0	-55.2			54.3	575.1	267.4	24.3	1.000012
16500.0	33.2	-55.0			53.0	575.3	263.4	23.4	1.000012
17000.0	32.4	-54.9			51.7	575.6	259.8	23.0	1.000012
17500.0	31.6	-54.7			50.4	575.8	255.9	23.1	1.000011
18000.0	30.9	-54.5			49.2	576.0	253.1	28.0	1.000011
18500.0	30.1	-54.3			48.0	576.3	254.6	32.9	1.000011
19000.0	29.5	-52.4			46.5	576.5	255.5	37.5	1.000010
19500.0	28.8	-50.0			44.9	581.9	258.4	41.6	1.000010
20000.0	28.1	-47.7			43.5	585.0	260.8	45.8	1.000010
20500.0	27.5	-46.3			42.0	586.1	262.2	48.2	1.000009
21000.0	26.9	-45.2			41.0	586.2	263.1	49.4	1.000009
21500.0	26.3	-45.4			40.2	586.0	264.0	50.7	1.000009
22000.0	25.7	-45.3			39.3	586.1	264.4	48.5	1.000009
22500.0	25.1	-44.2			38.2	589.4	264.6	45.3	1.000009
23000.0	24.6	-43.2			37.2	590.0	264.9	42.1	1.000008

UPPER AIR DATA

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 55

09500000058
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
85000.0	24.0	-42.1			36.2	592.1	264.3	36.6	1.000008
84000.0	23.5	-41.1			35.2	593.5	262.2	28.6	1.000008
84500.0	23.0	-40.0			34.3	594.8	258.5	20.7	1.000008
85000.0	22.5	-39.5			33.5	595.5	250.0	13.8	1.000007
85500.0	22.0	-40.2			32.6	594.8	239.8	16.3	1.000007
86000.0	21.5	-40.9			32.2	595.7	229.8	19.5	1.000007
86500.0	21.0	-41.6			31.6	592.8	218.8	23.1	1.000007
87000.0	20.5	-42.3			31.0	591.9	219.9	26.6	1.000007
87500.0	20.1	-43.1			30.4	590.9	223.5	30.0	1.000007
88000.0	19.7	-43.0			29.7	591.1	226.4	33.5	1.000007
88500.0	19.2	-42.6			29.1	591.5	226.3	36.0	1.000006
89000.0	18.8	-42.3			28.4	591.9	226.3	35.0	1.000006
89500.0	18.4	-42.0			27.7	592.3	226.3	33.9	1.000006
90000.0	18.0	-41.7			27.1	592.7	226.3	32.8	1.000006
90500.0	17.6	-41.4			26.5	593.1	226.0	32.3	1.000006
91000.0	17.2	-41.1			25.9	593.5	227.6	32.1	1.000006
91500.0	16.9	-40.8			25.3	593.8	227.2	31.9	1.000006
92000.0	16.5	-40.5			24.7	594.2	227.2	31.7	1.000005
92500.0	16.1	-40.2			24.1	594.6	228.4	31.6	1.000005
93000.0	15.6	-39.9			23.5	595.0	229.6	31.5	1.000005
93500.0	15.4	-39.6			23.0	595.4	230.6	31.3	1.000005
94000.0	15.1	-39.2			22.5	595.8	230.5	32.2	1.000005
94500.0	14.8	-38.9			22.0	596.2	230.0	33.4	1.000005
95000.0	14.4	-38.6			21.5	596.6	229.5	34.5	1.000005
95500.0	14.1	-38.3			21.0	597.0	230.5	35.1	1.000005
96000.0	13.8	-38.0			20.5	597.4	234.2	34.8	1.000005
96500.0	13.5	-37.7			20.0	597.8	237.4	34.7	1.000004
97000.0	13.2	-37.4			19.6	598.2	241.7	34.6	1.000004
97500.0	12.9	-37.1			19.1	598.6	247.3	33.6	1.000004
98000.0	12.7	-36.8			18.7	599.0	253.5	32.8	1.000004
98500.0	12.4	-36.5			18.2	599.4	260.0	32.4	1.000004
99000.0	12.1	-36.2			17.8	599.7	264.7	31.2	1.000004
99500.0	11.9	-35.8			17.4	600.1	266.8	28.3	1.000004
100000.0	11.6	-35.5			17.0	600.5	259.3	25.5	1.000004
100500.0	11.3	-35.2			16.6	600.9	272.5	22.8	1.000004
101000.0	11.1	-34.9			16.2	601.3			1.000004
101500.0	10.9	-34.6			15.9	601.7			1.000004
102000.0	10.6	-34.3			15.5	602.1			1.000003

MRN SIGNIFICANT LEVEL DATA

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

095006056
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3107.	9999.**	9999.**	-9999.**	-9999.**	99	-34.0	1.040+1
2658.	224.	16.	11.	11.	99	-43.2	2.000+1
2575.	254.	8.	2.	8.	99	-39.3	2.260+1
2465.	264.	25.	3.	25.	99	-45.5	2.580+1
2445.	262.	25.	3.	25.	99	-45.0	2.740+1
2386.	254.	17.	5.	17.	99	-54.3	3.000+1
2061.	258.	21.	4.	20.	99	-58.1	5.000+1
2049.	260.	21.	4.	20.	99	-60.0	5.100+1
1962.	268.	24.	1.	24.	99	-59.8	5.860+1
1862.	262.	24.	3.	24.	99	-61.6	6.660+1
1852.	262.	24.	3.	24.	99	-64.3	7.000+1
1798.	262.	26.	4.	25.	99	-62.5	7.740+1
1633.	262.	37.	5.	37.	99	-66.5	1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

MANDATORY LEVELS
095006 0056
5 M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5030.	14.0	-5.2	20.	86.5	4.5
800.0	6694.	9.7	-7.3	29.	344.3	1.4
750.0	8437.	6.1	-9.6	31.	279.5	11.8
700.0	10291.	5.9	-16.6	15.	250.2	10.0
650.0	12260.	1.5	-20.0	18.	263.7	18.0
600.0	14360.	-3.2	-23.7	19.	251.9	15.7
550.0	16597.	-8.5	-27.6	20.	246.9	10.8
500.0	18995.	-14.4	-31.3	21.	264.0	12.8
450.0	21591.	-21.2	-37.6	21.	269.6	14.3
400.0	24390.	-28.0	-43.5	21.	251.5	14.4
350.0	27496.	-34.8	-49.3	21.	265.5	29.5
300.0	30971.	-42.3			267.7	43.9
250.0	34943.	-50.6			260.5	50.2
200.0	39615.	-60.0			261.9	55.7
175.0	42329.	-62.0			262.6	55.4
150.0	45453.	-62.4			255.9	70.7
125.0	49130.	-63.7			256.7	71.5
100.0	53560.	-66.5			262.4	72.9
80.0	56052.	-63.0			262.1	50.7
70.0	60745.	-64.3			261.7	46.9
60.0	63650.	-60.1			267.4	46.4
50.0	67610.	-56.1			256.0	39.9
40.0	72247.	-56.4			263.1	34.3
30.0	76266.	-54.3			254.5	35.5
25.0	82224.	-44.6			264.6	45.0
20.0	87195.	-43.2			223.9	30.4
15.0	93606.	-39.2			230.5	32.3

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
5 APR. 79 1130 HRS MST
ASCENSION NO. 58

MPL MANDATORY LEVELS
09500 0508
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	TEMPERATURE DEW PT D.P DEG C	AIR DEG C	PRESSURE MILLIBARS
2853.	231.	17.	11.	13.	99	-39.2	1.500+1
2656.	224.	16.	11.	11.	99	-43.2	2.000+1
2500.	265.	23.	2.	23.	99	-44.0	2.500+1
2386.	254.	17.	5.	17.	99	-54.3	3.000+1
2202.	263.	15.	2.	16.	99	-56.4	4.000+1
2061.	258.	21.	4.	20.	99	-58.1	5.000+1
1947.	267.	24.	1.	24.	99	-60.1	6.000+1
1852.	262.	24.	3.	24.	99	-64.3	7.000+1
1769.	262.	28.	4.	28.	99	-63.0	8.000+1
1633.	262.	36.	5.	37.	99	-66.5	1.000+2
1496.	259.	37.	7.	36.	99	-63.7	1.250+2
1385.	256.	36.	9.	35.	99	-62.4	1.500+2
1290.	263.	29.	4.	28.	99	-62.0	1.750+2
1207.	262.	29.	4.	28.	99	-60.0	2.000+2
1065.	261.	28.	4.	28.	99	-50.6	2.500+2
944.	268.	28.	1.	28.	99	-42.3	3.000+2
838.	266.	15.	1.	15.	14	-34.8	3.500+2
744.	251.	7.	2.	7.	15	-28.0	4.000+2
656.	270.	7.	0.	7.	16	-21.2	4.500+2
579.	264.	7.	1.	7.	17	-14.4	5.000+2
508.	249.	6.	2.	5.	19	-8.5	5.500+2
436.	252.	6.	2.	6.	20	-3.2	6.000+2
374.	264.	9.	1.	9.	21	1.5	6.500+2
314.	250.	6.	3.	6.	22	5.9	7.000+2
257.	279.	6.	-1.	6.	16	6.1	7.500+2
204.	344.	1.	-1.	0.	17	9.7	8.000+2
153.	86.	2.	-0.	-2.	19	14.0	8.500+2